IN THE CLAIMS:

1.   (Currently Amended)   A method for a coordinated bringup of a repaired storage appliance in a storage appliance cluster, the repaired storage appliance having a disk sub-system, ~~the method~~ comprising ~~the steps of~~:

      asserting a first state in memory of the repaired storage appliance, the first state indicating that the repaired storage appliance awaits release of disk reservations of the disk subsystem by a surviving storage appliance;

      releasing the disk reservations in response to detection of the asserted first state by the surviving storage appliance;

      initializing the disk subsystem of the repaired storage appliance;

      asserting a second state in memory of the repaired storage appliance, the second state indicating that the repaired storage appliance has initialized the disk subsystem; and

      performing a giveback operation by the surviving storage appliance in response to detecting the second state.

2.   (Currently Amended)   The method of claim 1 further comprising ~~the steps of~~:

      completing the repaired storage appliance initialization; and

      processing data access requests by the repaired storage appliance.

3.   (Cancelled)

4.   (Previously Presented)   The method of claim 1 wherein the surviving storage appliance detects the first state by performing a remote direct memory access read operation to the memory.

1 5. (Previously Presented) The method of claim 1 wherein the surviving storage ap-

2 pliance detects the second state by performing a remote direct memory access operation

3 of the memory.

1 6. (Original) The method of claim 1 wherein the surviving storage appliance ceases

2 to process data access requests directed to the repaired storage appliance after performing

3 the giveback operation.

1 7. (Currently Amended) A storage appliance for use in a storage system cluster, the

2 storage appliance comprising:

3 a storage operating system having a cluster failover layer adapted to perform a

4 coordinated bringup operation in association with a partner storage appliance, wherein

5 the coordinated bringup operation comprises ~~the steps of~~:

6 (i) asserting a first state in memory of the storage appliance;

7 (ii) initializing a disk subsystem of the repaired storage appliance in re-

8 sponse to detecting a release of disk reservations by a partner storage appliance;

9 (iii) asserting a second state in memory of the storage appliance;

10 (iv) processing data access requests directed to the storage appliance after

11 a giveback operation performed by the partner storage appliance; and

12 whereby a period of time during which clients of the storage system are without

13 connectivity is minimized.

1 8. (Previously Presented) The storage appliance of claim 7 wherein the cluster

2 failover layer is further adapted to perform routine remote direct memory access read op-

3 erations to the partner storage appliance to detect a state of the partner storage appliance.

1 9. (Previously Presented) The storage appliance of claim 8 wherein the second state

2 comprises an indication that the storage appliance has initialized its disk subsystem.

1   10.   (Previously Presented)   The storage appliance of claim 8 wherein the first state

2   comprises an indication that the storage appliance awaits release of disk reservations by

3   the partner storage appliance.

1   11.   (Currently Amended)   A method for a coordinated bringup of a repaired storage

2   appliance in a storage appliance cluster, the repaired storage appliance having a disk sub-

3   system, ~~the method~~ comprising ~~the steps of~~:

4   asserting a first state in memory of the repaired storage appliance;

5   releasing disk reservations in response to detection of the asserted first state by a

6   surviving storage appliance;

7   initializing the disk subsystem of the repaired storage appliance;

8   asserting a second state in memory of the repaired storage appliance; and

9   performing a giveback operation by the surviving storage appliance in response to

10 detecting the second state.

1   12.   (Cancelled)

1   13.   (Original)   The method of claim 11 wherein the surviving storage appliance de-

2   tects the first state by performing a remote direct memory access read operation to the

3   predetermined memory location.

1   14.   (Original)   The method of claim 11 wherein the surviving storage appliance de-

2   tects the second state by performing a remote direct memory access operation of the pre-

3   determined memory location.

1   15.   (Original)   The method of claim 11 wherein the surviving storage appliance

2   ceases to process data access requests directed to the repaired storage appliance after per-

3   forming the giveback operation.

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1   16.   (Previously Presented)   The method of claim 11 wherein the first state comprises

2   an indication that the repaired storage appliance awaits release of disk reservations by the

3   surviving storage appliance.

1   17.   (Previously Presented)   The method of claim 11 wherein the second state com-

2   prises an indication that the repaired storage appliance has initialized its disk subsystem.

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1   18.   (Original)   The method of claim 11 wherein the set of disk reservations com-

2   prises small computer systems interface reservations.

1   19.   (Previously Presented)   A computer readable medium, including program instruc-

2   tions executing on a storage appliance, for a coordinated bringup of a repaired storage

3   appliance in a storage appliance cluster, the repaired storage appliance having a disk sub-

4   system, the computer readable medium including instructions for performing the steps of:

5   asserting a first state in memory of the repaired storage appliance, the first state

6   indicating that the repaired storage appliance awaits release of disk reservations by a sur-

7   viving storage appliance;

8   releasing disk reservations in response to detection of the asserted first state by a

9   surviving storage appliance;

10   initializing the disk subsystem of the repaired storage appliance;

11   asserting a second state in memory of the repaired storage appliance, the second

12   state indicating that the repaired storage appliance has initialized its disk subsystem; and

13   performing a giveback operation by the surviving storage appliance in response to

14   detecting the second state.

1   20.   (Original)   The computer readable medium of claim 19 further comprising the

2   steps of:

3   completing the repaired storage appliance initialization; and

4   processing data access requests by the repaired storage appliance.

1   21.   (Cancelled)

1   22.   (Previously Presented)   The computer readable medium of claim 19 wherein the

2   surviving storage appliance detects the first state by performing a remote direct memory

3   access read operation to the memory of the repaired storage appliance.

1   23.   (Previously Presented)   The computer readable medium of claim 19 wherein the

2   surviving storage appliance detects the second state by performing a remote direct mem-

3   ory access operation of the memory of the repaired storage appliance.

1   24.   (Currently Amended)   A method for a coordinated bringup of a repaired storage

2   appliance in a storage appliance cluster, ~~the method~~ comprising ~~the steps of~~:

3   asserting a first state indicating that the repaired storage appliance awaits release,

4   by a surviving storage appliance, of disk reservations for a disk subsystem of the repaired

5   storage appliance;

6   releasing the disk reservations in response to detection of the asserted first state

7   by the surviving storage appliance;

8   initializing the disk subsystem of the repaired storage appliance in response to re-

9   leasing the disk reservations by the surviving storage appliance;

10   asserting a second state indicating that the repaired storage appliance has initial-

11 ized the disk subsystem; and

12   performing a giveback operation by the surviving storage appliance in response to

13 detecting the second state.

1   25.   (Previously Presented)   The method of claim 24, wherein the first state and sec-

2   ond state are stored in a state data structure in memory of the repaired storage appliance.

1   26.   (Previously Presented) The method of claim 25 wherein the surviving storage

2   appliance detects the first state by performing a remote direct memory access read opera-

3   tion to the state data structure.

1   27.   (Previously Presented) The method of claim 25 wherein the surviving storage

2   appliance detects the second state by performing a remote direct memory access opera-

3   tion to the state data structure.

1   28.   (Currently Amended) A storage appliance for use in a storage system cluster, the

2   storage appliance comprising:

3   a storage operating system having a cluster failover layer adapted to perform a

4   coordinated bringup operation in association with a partner storage appliance, wherein

5   the coordinated bringup operation comprises ~~the steps of~~:

6   asserting a first state indicating that the repaired storage appliance awaits release,

7   by a surviving storage appliance, of disk reservations for a disk subsystem of the repaired

8   storage appliance;

9   releasing the disk reservations in response to detection of the asserted first state

10   by the surviving storage appliance;

11   initializing the disk subsystem of the repaired storage appliance in response to re-

12   leasing the disk reservations by the surviving storage appliance;

13   asserting a second state indicating that the repaired storage appliance has initial-

14   ized the disk subsystem; and

15   performing a giveback operation by the surviving storage appliance in response to

16   detecting the second state.

1   29.   (Previously Presented) The storage appliance of claim 28, wherein the first state

2   and second state are stored in a state data structure in memory of the repaired storage ap-

3   pliance.

1   30.   (Previously Presented)   The storage appliance of claim 29 wherein the surviving

2   storage appliance detects the first state by performing a remote direct memory access

3   read operation to the state data structure.

1   31.   (Previously Presented)   The storage appliance of claim 29 wherein the surviving

2   storage appliance detects the second state by performing a remote direct memory access

3   operation to the state data structure.

1   32.   (Previously Presented)   A computer readable medium, including program instruc-

2   tions executing on a storage appliance, for a coordinated bringup of a repaired storage

3   appliance in a storage appliance cluster, the computer readable medium including instruc-

4   tions for performing the steps of:

5   asserting a first state indicating that the repaired storage appliance awaits release,

6   by a surviving storage appliance, of disk reservations for a disk subsystem of the repaired

7   storage appliance;

8   releasing the disk reservations in response to detection of the asserted first state

9   by the surviving storage appliance;

10   initializing the disk subsystem of the repaired storage appliance in response to re-

11   leasing the disk reservations by the surviving storage appliance;

12   asserting a second state indicating that the repaired storage appliance has initial-

13   ized the disk subsystem; and

14   performing a giveback operation by the surviving storage appliance in response to

15   detecting the second state.

1   33.   (Previously Presented)   The computer readable medium of claim 32, wherein the

2   first state and second state are stored in a state data structure in memory of the repaired

3   storage appliance.

1   34.   (Previously Presented) The method of claim 33 wherein the surviving storage

2   appliance detects the first state by performing a remote direct memory access read opera-

3   tion to the state data structure.

1   35.   (Previously Presented) The method of claim 33 wherein the surviving storage

2   appliance detects the second state by performing a remote direct memory access opera-

3   tion to the state data structure.